



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,208	11/02/2005	Raoul Florent	PHFR030020US	3440

24737 7590 07/29/2008

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

RASHIDIAN, MOHAMMAD M

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

07/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,208

Applicant(s)

FLORENT ET AL.

Examiner

MEHDI RASHIDIAN

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-8 and 11-14 is/are rejected.
7) ☒ Claim(s) 9-10 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 03 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. **Claim 13** is rejected under 35 U.S.C. 101 because the claims contain a program, which is non-statutory subject matter because a program must be recited as "A computer-readable medium encoded with a computer program" in order to be considered statutory subject matter. Similarly, computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-

84, 32 USPQ2d at 1035. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions.

Regarding **claim 13**, a computer program comprising a set of instructions for implementing a method as claimed in **claim 11** when said program is executed by a processor, Examiner recommends, a computer program comprising a set of instructions embodied or encoded on a computer-readable medium for implementing a method as claimed in **claim 11** when said program is executed by a processor.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-8, 11-14 are rejected under 35 U.S.C. 102(b) as being unpatentable over J. Dijkstra et al ("Automated Border Detection in Intra-Vascular Ultrasound Images for Quantitative Measurement of Vessel, Lumen and Stent Parameters" by IEEE Computers in Cardiology 2001: 28:25- 28, published 23 September 2001, ISBN: 0-7803-7266-2) henceforth referred to as Dijkstra.

Regarding **claim 1**, Dijkstra discloses, a viewing system (IVUS technique which provides real time resolution tomographic images for visualizing the in-stent restenosis, Section 1, Introduction), comprising acquisition means for acquiring a sequence of images, (pullback devices to provide fast overview of the pull back sequence, Page 25, right column, last two lines, Page 26, left column first eight lines),

- detection means for detecting an object of interest in said sequence of images (from the pullback image series a user defined number of cross section segments for analysis and the contour in the defined segment is detected, detecting object of interest, page 26, sections 2, and 2.1),
- said detection means comprising: localizer detection sub-means for detecting a location localizers related to said object of interest, border detection sub-means for detecting a location of borders related to said object of interest, using said location of localizers, (page 26, left column, section 2.1),
- viewing means for displaying said sequence of images, (fig. 2, page 26, left column, lines 1-14, visualization...).

Regarding **claim 2**, a viewing system as claimed in **claim 1**, Dijkstra discloses, wherein said border detection sub-means comprise: initialization sub-means for building an

Art Unit: 2624

initial contour of said borders, containing said localizers, from a priori knowledge about said object of interest, active contour sub-means for moving said initial contour under the effect of forces related to said object of interest within said sequence of images (fig. 1, page 26, left column last paragraph, page 26 right column, last paragraph, initialization...).

Regarding **claim 3**, a viewing system as claimed in **claim 1**, Dijkstra discloses , comprising enhancement means for enhancing said borders using said location of borders and delivering a sequence of enhanced images, (page 27, right column, last paragraph).

Regarding **claim 4**, a viewing system as claimed in **claim 1**, Dijkstra discloses, comprising measurement means for measuring characteristics of said object of interest using said location of borders, (page 26, first 15 lines of section 2.2).

Regarding **claim 5**, a viewing system as claimed in **claim 4**, Dijkstra discloses, wherein said characteristics are widths of said object of interest along a length of said object of interest, (page 27, section 2.4).

Regarding **claim 6**, a viewing system as claimed in **claim 1**, Dijkstra discloses, wherein said acquisition means are able to acquire at least two views of said object of interest, said viewing system also comprising 3D representation means for delivering a 3D

Art Unit: 2624

representation of said object of interest from said views and said location of borders, (fig. 1, page 25, left column, last paragraph, right column, last paragraph).

Regarding **claim 7**, a viewing system as claimed in **claim 6**, Dijkstra discloses, wherein a cylindrical model is used by said 3D representation means when said object of interest has a tubular shape, (fig. 1, page 25, right column, last paragraph).

Regarding **claim 8**, a viewing system as claimed in **claim 1**, Dijkstra discloses, wherein said object of interest is a stenosis or a stent and said localizers are a tip (9) or balloon markers, (fig. 3, page 25, right column, top 10 lines).

Regarding **claim 11**, is a method analogous to the system of **claim 1**, grounds of rejection analogous to those used in **claim 1** are applicable to **claim 11**.

Regarding **claim 12**, is a device analogous to the system of **claim 1**, grounds of rejection analogous to those used in **claim 1** are applicable to **claim 12**.

Regarding **claim 13**, is a computer program analogous to the system of **claim 1**, grounds of rejection analogous to those used in **claim 1** are applicable to **claim 13**.

Regarding **claim 14**, refer to rejection of **claim 1**.

Allowable Subject Matter

5. **Claims 9 and 10** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEHDI RASHIDIAN whose telephone number is (571)272-9763. The examiner can normally be reached on Mon-Thurs 9:00AM to 8:00PM, ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on (571) 272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mehdi Rashidian
07/14/2008

/Samir A. Ahmed/
Supervisory Patent Examiner, Art Unit 2624